Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An etching method ~~of~~ for forming a trench having a prescribed depth in an organic insulating film without using an etching stopper layer, comprising:

generating a plasma from a molecular gas containing hydrogen atom and nitrogen atom,

measuring a light emission spectral intensity ratio between ~~hydrogen atom and~~ cyan molecule and hydrogen atom in the plasma, and

carrying out an etching process while keeping the measured value at a value not exceeding a pre-scribed value.

2. (previously presented) The etching method of organic insulating film according to Claim 1 comprising:

keeping a light emission spectral intensity ratio CN/H at 1 or less, wherein H represents a light emission spectral intensity of hydrogen atom at a wavelength of about 486 nm and CN represents a light emission spectral intensity of cyan molecule at a wavelength of about 388 nm in the plasma.

3. (currently amended) An etching method ~~of~~ for forming a trench having a prescribed depth in an organic insulating film without using an etching stopper layer, comprising:

generating a plasma from a hydrogen gas and a nitrogen gas or an ammonia gas, and

carrying out the etching process while controlling a flow rate of the hydrogen gas so that a light emission spectral intensity ratio between ~~hydrogen atom~~

~~and~~ cyan molecule and hydrogen atom in the plasma comes to a value not exceeding a prescribed value.

4. (previously presented) The etching method of organic insulating film according to Claim 3, wherein said process is carried out while controlling the pressure of processing so as to come to a constant pressure.

5. (currently amended) An etching method ~~of~~ for forming a trench having a prescribed depth in an organic insulating film without using an etching stopper layer, comprising:

feeding a molecular gas containing a nitrogen gas and a hydrogen gas or a molecular gas containing hydrogen atom and nitrogen atom into an etching process chamber in which a sample to be etched having an organic insulating film formed thereon has been placed,

adjusting a pressure in the etching process chamber to a pressure lower than 10 Pa,

generating a plasma in which a light emission spectral intensity ratio CN/H is 1 or less, wherein H represents a light emission spectral intensity of hydrogen atom at a wavelength of about 486 nm and CN represents a light emission spectral intensity of cyan molecule at a wavelength of about 388 nm, and

processing the sample to be etched with said plasma.

6. (previously presented) The etching method of an organic insulating film according to Claim 5, wherein a hydrogen gas and a nitrogen gas are used for a formation of said plasma and a mixing ratio of said hydrogen gas to said nitrogen gas is 10 or more.

7. (previously presented) The etching method of an organic insulating film according to Claim 6, wherein the total flow rate of said hydrogen gas and said nitrogen gas is

200 cc/minute or more.

8. (previously presented) The etching method of an organic insulating film according to Claim 5, wherein said molecular gas containing hydrogen atom is a hydrogen gas, said molecular gas containing nitrogen atom is an ammonia gas, and a mixing ratio of said hydrogen gas to said ammonia gas is 10 or more.

9. (previously presented) The etching method of an organic insulating film according to Claim 8, wherein the total flow rate of said hydrogen gas and said ammonia gas is 200 cc/minute or more.

10. (new) An etching method for forming a trench having a prescribed depth in an organic insulating film, comprising the step of:

providing a wafer having an organic insulating film thereon, the wafer not having an etching stopper layer around the prescribed depth of the organic insulating film;

generating a plasma from a gas containing hydrogen and nitrogen;

measuring a light emission spectral intensity ratio between cyan molecules and hydrogen atoms in the plasma;

etching a portion of the organic insulating film with the plasma to the prescribed depth less than a thickness of the organic insulating film with the plasma; and

controlling the plasma to keep a measured value of the light emission spectral intensity ratio at a value not exceeding a prescribed value so as to form the trench in the organic insulating film to the prescribed depth while suppressing microtrenching.

11. (new) The etching method according to claim 10, wherein the wafer is a semiconductor wafer.

12. (new) The etching method according to claim 11, wherein the semiconductor wafer comprises underlayer interconnect wiring under the organic insulating film.

13. (new) The etching method according to claim 10, wherein the gas containing hydrogen and nitrogen is a molecular gas.

14. (new) The etching method according to claim 13, wherein the molecular gas contains nitrogen gas and hydrogen gas.

15. (new) The etching method according to claim 13, wherein the molecular gas contains ammonia gas and hydrogen gas.

16. (new) The etching method according to claim 10, wherein the step of controlling the plasma comprises controlling the plasma to keep the emission spectral intensity ratio CN/H at 1 or less, wherein H represents a light emission spectral intensity of hydrogen atom at a wavelength of about 486 nm and CN represents a light emission spectral intensity of cyan molecule at a wavelength of about 388 nm in the plasma.

17. (new) The etching method according to claim 16, wherein the plasma is controlled by controlling a flow rate of hydrogen containing gas.

18. (new) The etching method according to claim 16, wherein the plasma is

controlled by controlling a flow rate of hydrogen containing gas and controlling electric power for generating the plasma.

19. (new) The etching method according to claim 18, further comprising adjusting a pressure in an etching process chamber in which the organic insulating film is etched to a pressure lower than 10 Pa.

20. (new) The etching method according to claim 14, wherein a mixing ratio of the hydrogen gas to the nitrogen gas is 10 or more.

21. (new) The etching method according to claim 20, wherein a total flow rate of the hydrogen gas and the nitrogen gas is 200 cc/minute or more.

22. (new) The etching method according to claim 15, wherein a mixing ratio of the hydrogen gas to the ammonia gas is 10 or more.

23. (new) The etching method according to claim 20, wherein a total flow rate of the nitrogen gas and the ammonia gas is 200 cc/minute or more.